

REMARKS

Claim 1 is pending in this application. By this Amendment, claim 1 is amended to incorporate prior claim 2 therein, and claim 2 is canceled. This amendment to claim 1 addresses the rejection under 35 U.S.C. §102(b) as discussed below.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments:

(a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments merely include a previously considered dependent claim into independent claim 1); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,548,350 (hereinafter Yamada). This rejection is respectfully traversed.

By this Amendment, claim 1 has been amended to recite a rear projector that includes a dust-proofing elastic member disposed between the periphery of the screen panel and the opening edge portion of the opening of the housing, wherein the dust-proofing elastic member is formed of a closed-cell expanded resin. An example rear projector according to claim 1 is illustrated in Fig. 1 of the present specification. In Fig. 1, the rear projector is shown as including a housing 2 including opening 21 defined by an opening edge portion 22. A screen panel 3 is attached to the front side of the housing such the opening edge portion 22 of the housing 2 and of periphery 34 of the screen panel 3 are opposed to each other. The dust-

proofing elastic member 7 is disposed between the periphery 34 of the screen panel 3 and the opening edge portion 22 of the housing 2.

In the Final Rejection, the Patent Office maintained that Yamada teaches each and every limitation recited in claim 1. Applicants respectfully disagree.

Yamada describes a projection-type television in which the screen is maintained on the framework even when the temperature changes or an external force is applied. See the Abstract. As shown in Fig. 2 of Yamada, the screen 1 is mounted in framework 2, and an end portion of this framework 2 is inserted into a slot 3b formed around an opening 3a of the housing 3. See col. 4, lines 64-67 and col. 5, lines 8-12. Yamada further teaches that an elastic member 5 may be included between the framework 2 and the screen 1 in order to assist in holding the screen in the framework 2. See col. 7, lines 1-10.

In the Final Rejection, the Patent Office acknowledged that Yamada does not disclose that the elastic member 5 must be comprised of a closed-cell expanded resin. However, the Patent Office alleged that the foams described in Yamada were closed-cell expanded resins. Applicants respectfully submit that this allegation is not well-founded.

As explained at paragraph [0018] of the present specification, the dust-proofing sealing member 7 of the rear projector must be formed of a closed-cell expanded resin so as to be excellent in dust-proofing capability and have a high elastic deformation rate. For dust-proofing capability, it is thus important that the sealing member be comprised of a closed-cell expanded resin. As explained below, the difference between closed-cell expanded resins and open-cell expanded resins is profound, and Yamada cannot be viewed as teaching or suggesting the use of closed-cell expanded resins.

First, closed-cell and open-cell expanded resins differ in physical structure. In closed-cell expanded resins, the walls between individual cells within the resin are complete such that the cells are independent from each other (i.e., not continuous with each other). In

contrast, the walls between cells in an open-cell expanded resin are incomplete and have openings such that the cells in the resin are continuous with each other. See the attached explanation of closed-cell and open-cell resin structures from a web page of Fuso Rubber (original Japanese and English-language translation attached). See also the attached explanation of closed-cell structures from a web page of Nitto Denko.

As a result of this structural difference, closed-cell and open-cell expanded resins have different performance properties. For example, because the walls between cells are complete and the cells are independent from each other in a closed-cell expanded resin, the closed-cell expanded resin does not have air permeability. The walls between cells within the open-cell expanded resin have holes such that these cells are continuous with each other, thereby imparting air permeability to the open-cell expanded resin. This difference is significant with respect to the present application because closed-cell expanded resins that lack air permeability are able to reliably suppress the entrance of dust, unlike open-cell expanded resins.

Additionally, in closed-cell expanded resins, because the walls between cells are complete, flexibility is high and elastic deformation rate is large. As a result, even if a screen panel 3 is largely expanded, the sealing member 7 is able to deform while staying reliably attached to a periphery 34 and an opening edge portion 22.

Yamada describes that the elastic member 5 may be comprised of materials such as polyurethane foam, polyethylene foam or other plastic foams that include small pores. See col. 6, lines 55-62 of Yamada. However, Yamada does not teach or suggest that the elastic member must be comprised of a closed-cell expanded resin as required in present claim 1.

As discussed above, a closed-cell expanded resin has the advantage of being excellent in suppressing dust from entering the housing, while also having a high elastic deformation rate. Yamada does not teach or suggest use of a closed-cell expanded resin as the elastic

member 5. Moreover, because Yamada does not teach or suggest that the elastic member 5 is to be used to impart dust-proofing of the seal, nothing in Yamada would have directed one of ordinary skill in the art to have selected a closed-cell expanded resin over an open-cell expanded resin in Yamada.

Finally, contrary to the assertions of the Patent Office, none of the foam materials such as polyurethane foam, polyethylene foam or other plastic foams are inherently closed-cell. The Patent Office has failed to establish a *prima facie* case of anticipation, and the rejection must be withdrawn for this additional reason.

For all the foregoing reasons, it is evident that Yamada neither teaches nor suggests the rear projector as defined in present claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claim 1 is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: August 8, 2005

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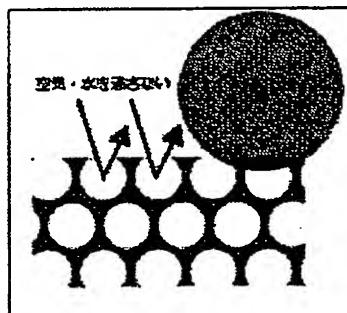
DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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F FUSO RUBBER

扶桑ゴム産業

ホーム > 用語解説 > 単独気泡(独立気泡)・連続気泡**単独気泡(独立気泡)・連続気泡**

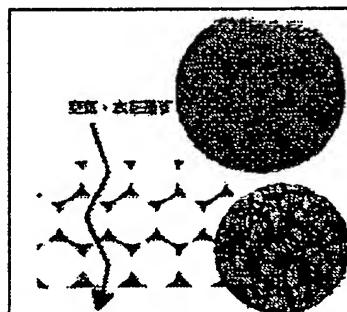
スポンジは、ゴムに発泡剤を配合して、発泡剤の熱分解により生ずるガス(ピールの泡を想像したらよいかと思います。)によつてゴムを多孔性の構造にしたもので。気泡構造の単位を「セル」といいます。各セルが完全に独立しているものを単独気泡(独立気泡)型、セルが隣接するセルと「部屋」が連続しているものを連続気泡型といいます。

単独気泡(独立気泡)

単独気泡(独立気泡型)は吸水性が極めて小さく、衝撃吸収性、加工性、浮揚性にすぐれています。ちょっと写真が小さいですが「セル」がつながっていないので、空気や水を通しません。ポリエチレンフォーム(スポンジ)は基本的に単独気泡です。

<用途>

ビート板、ガスケットやクッション材

連続気泡

連続気泡型は吸水性、通気性、吸音性にすぐれています。左の写真で下のものが良くわかるかと思います。ここまで「泡」(セル)が大きくなるとこのような感じになります。「セル」がつながっているので、空気や水を通します。ウレタンフォーム(スポンジ)は連続気泡です。

<用途>

台所用スポンジ、クッション材やろ過材など

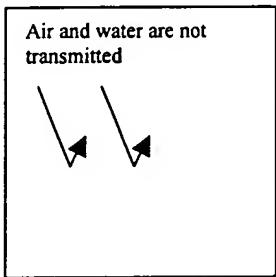
Best Available Copy

Independent cell (closed-cell)·Open-cell

A sponge has a structure in which a forming agent is mixed into rubber and the rubber has pores due to a gas generated by heat decomposition of the forming agent (think of beer bubbles).

A unit of a bubble structure is called a "cell". An item in which each cell is completely independent from other cells is an independent cell (closed-cell) type, and an item in which a "chamber" of one cell is continuous with that of an adjacent cell adjacent is an open-cell type.

Independent (closed-cell)



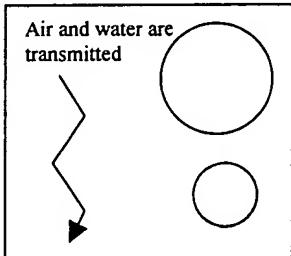
[See original for full drawing]

An **independent cell** (closed-cell) type has extremely low water absorption, and is excellent in shock absorption, processability, and floatability. This picture is slightly small, but the "cells" are not continuous, so **air and water are not transmitted**. A polyethylene foam (sponge) is basically an independent cell.

<Usage>

Beat plate, gasket, cushion material

Open-cell



[See original for full drawing]

An **open-cell** type is excellent in water absorption, air permeability, and sound absorption. This is shown in the lower portion of the picture. When "bubbles" (cells) become this large, the material looks like this. The "cells" are continuous, so **air and water are transmitted**. A urethane foam (sponge) is an open-cell type.

<Usage>

Kitchen sponge, cushion material, filter, etc.



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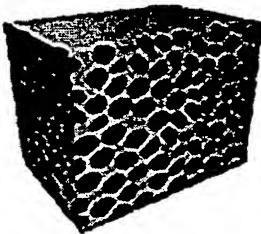
Product Information

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EPT SEALER

No.6800 Series

Foam sealing material with closed cell structure offers flexibility and elasticity as well as weather resistance and watertightness.



Closed cell

Outline

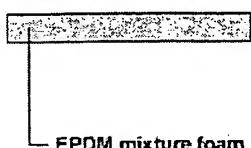
The Nitto Denko No. 6800 Series is a high-function foam sealing material consisting of EPDM mixture with closed cells offering the best durability and weather resistance of all general-purpose rubber. The No. 6800 Series includes tape materials coated with butyl rubber adhesive and synthetic resin adhesive. You can select the type that best meets your needs.

Features

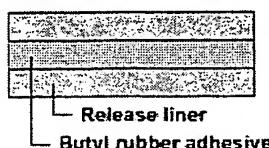
- Superior weather resistance and watertightness properties. Offers better heat resistance than foam water seals such as urethane and polyethylene.
- No. 680 uses butyl rubber adhesive and adheres well to rough surfaces.
- No. 681 uses synthetic resin adhesive and offers superior holding power, heat resistance and weather resistance.
- Closed cells offer flexibility and elasticity.
- Can be easily installed in clearances with complicated shapes as well.

Structure

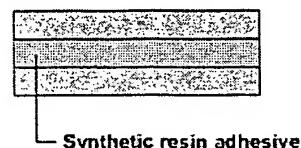
▼No.6800



▼No.680



▼No.681



Specifications

Thickness (mm)	Width (mm)	Length (m)
3, 5, 6, 8, 10, 12, 14	900	2

Properties

Product No.	Specific gravity	Tensile strength (N/cm ²)	Elongation (%)	Compressive hardness (N/cm ²)	
				25%	50%
No.6800					
No.680	0.12	3.6	260	0.22	0.63

No.681

*Conforms to JIS K 6767

Applications

- Sealing of places where air-conditioner frames are put together
- Places requiring superior watertightness
- For sunroof mounting

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